

REMARKS

Applicant has reviewed and considered the office action mailed on June 14, 2002 and the references cited therewith.

Claims 22, 32 and 35 are amended, claim 13 is canceled; as a result, claims 1-6, 8-10, 12, 14, 18-23, 31-35 and 38-46 are now pending in the application.

§112 Rejection of the Claims

Claim 22 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 22 is amended to clarify the subject matter of the claim. The amendment is not being made in response to an art rejection, and no new matter is added by the amendment. Support for the amendment is found, for example, on page 5 at lines 5-7 of the specification.

Claims 13, 32, and 35 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 is cancelled, so the rejection is moot. Claims 32 and 35 are amended to clarify the subject matter of the claims. The amendments are not being made in response to an art rejection, and no new matter is added by the amendment. Support for the amendments is found, for example, on page 7 of the specification.

§102 Rejection of the Claims

Claims 1, 4-6, 8-10, 12-14, 18, 20, 21, 23, and 31-34 were rejected under 35 U.S.C. § 102(e) as being anticipated by Juengling et al. (U.S. Patent No. 6,333,556). Claim 13 is cancelled by this amendment, so the rejection is moot. Applicant does not admit that Juengling et al. is prior art and reserves the right to "swear behind" Juengling et al. as provided for under 37 C.F.R. 1.131. Applicant traverses the rejections of claims 1, 4-6, 8-10, 12, 14, 18, 20, 21, 23 and 31-34.

Claims 1, 6 and 10 recite, "the conductive structure is coupled to the electronic chip." In contrast, Juengling et al. teaches at column 3, lines 20-22: "Substrate 12*b* may comprise, for

example, an insulative layer over a semiconductor substrate." Thus, Juengling et al. isolates the conductive structures from the semiconductor substrate, so Juengling et al. does not teach a conductive structure coupled to an electronic chip. Hence, Juengling et al. fails to teach each of the elements of claims 1, 6 and 19. Thus, the office action fails to state a *prima facie* case of anticipation with respect to claims 1, 6 and 10.

Claims 4-5 are dependent on claim 1, claims 8-9 are dependent on claim 6 and claims 12 and 14 are dependent on claim 10. For reasons analogous to those provided above and the elements in the claims, applicant respectfully submits that the office action fails to state a *prima facie* case of anticipation with respect to claims 4-5, 8-9, 12 and 14.

Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 1, 4-6, 8-10, 12 and 14.

Claims 18 recites, "a conductive structure capable of coupling the electronic chip to the connective structure." In contrast, Juengling et al. teaches at column 3, lines 20-22: "Substrate 12*b* may comprise, for example, an insulative layer over a semiconductor substrate." Thus, Juengling et al. isolates the conductive structures from the semiconductor substrate, so Juengling et al. does not teach "a conductive structure capable of coupling the electronic chip to the connective structure." Hence, Juengling et al. fails to teach each of the elements of claim 18. Thus, the office action fails to state a *prima facie* case of anticipation with respect to claim 18.

Claims 19-21 and 23 are dependent on claim 18. For reasons analogous to those provided above and the elements in the claims, applicant respectfully submits that the office action fails to state a *prima facie* case of anticipation with respect to claims 19-21 and 23.

Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 18-21 and 23.

Claim 31 recites, "a post structure mounted on the electronic chip and capable of protecting an air-bridge structure and supporting a *C4 structure* [emphasis added]." In contrast, Juengling et al. fails to teach a C4 structure. The abstract of Juengling et al. summarizes the teachings of the patent as follows: "The invention encompasses methods of forming insulating materials between conductive elements." Hence, Juengling et al. fails to teach each of the elements of claim 31. Thus, the office action fails to state a *prima facie* case of anticipation with

respect to claim 31.

Claims 32-34 are dependent on claim 31. For reasons analogous to those provided above and elements in the claims, applicant respectfully submits that the office action fails to state a *prima facie* case of anticipation with respect to claims 32-34.

Therefore, applicant requests withdrawal of the rejections of claims 31-34 and reconsideration and allowance of claims 31-34.

Claims 38-42 and 44-46 were rejected under 35 U.S.C. § 102(e) as being anticipated by Clevenger et al. (U.S. Patent No. 6,255,712). Applicant does not admit that Clevenger et al. is prior art and reserves the right to swear behind Clevenger et al. as provided for under 37 C.F.R. 1.131. Applicant traverses the rejections of claims 38-42 and 44-46.

Claim 38 recites, "a C4 connection coupled to the electronic chip through the plurality of conductive segments. . . ." In contrast, the teachings of Clevenger et al. are summarized in the abstract of the patent: "Disclosed is a structure and process for incorporating air or other gas as a permanent dielectric medium in a multilevel chip by providing CVD diamond as a semi-sacrificial inter-level and intralevel dielectric material." Hence, Clevenger et al. fails to teach a C4 structure. Thus, the office action fails to teach each of the elements of claim 38. Therefore, the office action fails to state a *prima facie* case of anticipation with respect to claim 38.

Claims 39-42 and 44-46 are dependent on claim 38. For reasons analogous to those stated above and elements in the claims, applicant respectfully submits that the office action fails to state a *prima facie* case of obviousness with respect to claims 39-42 and 44-46.

§103 Rejection of the Claims

Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Juengling et al. Applicant does not admit that Juengling et al. is prior art and reserves the right to "swear behind" Juengling et al. as provided for under 37 C.F.R. 1.131. Applicant traverses the rejections of claims 2 and 3.

Claim 2 recites, "wherein the electronic chip is a memory chip." Claim 3 recites, "wherein the memory chip is a dynamic random access memory chip." Since Juengling et al. does not teach a memory chip or a random access memory chip, applicant assumes that the

Examiner is taking official notice of the missing elements. Applicant respectfully objects to the Examiner taking of official notice in a single reference obviousness rejection in which all the recited elements of the rejected claims are not found in the reference, and pursuant to M.P.E.P. § 2144.03, applicant traverses the assertion of official notice and requests that the Examiner cite a reference that teaches each of the missing elements. If the Examiner cannot cite a reference that teaches each of the missing elements, applicant respectfully requests that the Examiner provide an affidavit describing how the missing elements are present in the prior art. If the examiner cannot cite a reference or provide an affidavit, applicant requests withdrawal of the rejection and reconsideration and allowance of claims 2 and 3.

Claims 19 and 43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Clevenger et al. Applicant does not admit that Clevenger et al. is prior art and reserves the right to "swear behind" Clevenger et al. as provided for under 37 C.F.R. 1.131. Applicant traverses the rejections of claims 19 and 43.

Claim 19 recites, "wherein the electronic chip is a dynamic random access memory chip." Claim 43 recites, "wherein the material is a foam." Since Clevenger et al. does not teach a dynamic random access memory chip or a material that is a foam, applicant assumes that the Examiner is taking official notice of the missing elements. Applicant respectfully objects to the Examiner taking of official notice in a single reference obviousness rejection in which all the recited elements of the rejected claims are not found in the reference, and pursuant to M.P.E.P. § 2144.03, applicant traverses the assertion of official notice and requests that the Examiner cite a reference that teaches each of the missing elements. If the Examiner cannot cite a reference that teaches each of the missing elements, applicant respectfully requests that the Examiner provide an affidavit describing how the missing elements are present in the prior art. If the examiner cannot cite a reference or provide an affidavit, applicant requests withdrawal of the rejection and reconsideration and allowance of claims 19 and 43.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone applicant's attorney at 612-371-2109 to facilitate prosecution of the application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date

September 16, 2002

By

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 14 day of September, 2002.

Name

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Signature

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